

REMARKS

Claims 1-8 were pending. Claim 8 was elected, with traverse. Claims 1-7 have been cancelled herein. Accordingly, Claim 8 is pending and being examined.

Support for the amendment to claim 8 is merely to correct the antecedent basis. The term "water" is replaced with the term "liquid". Accordingly, this change does not involve new matter and its entry is respectfully requested.

RESTRICTION REQUIREMENT

The Patent Office is requiring election to one of the following inventions under 35 U.S.C. 121, Claims 1-7 drawn to a Water Processing Device, classified in class 210, subclass 175+, and Claim 8, drawn to A Liquid Seal, classified in class 277, subclass 431.

ELECTION

Applicant hereby affirms its election of Claim 8 of Group II.

THE REJECTION UNDER 35 USC §112, SECOND PARAGRAPH

Claim 8 has been rejected as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the Office alleges that there is antecedent basis for the language "the water," in line 6 of Claim 8.

Applicant has amended Claim 8 to correct the language from "the water" to "the liquid," providing antecedent basis for this language and removing the basis for this objection.

THE REJECTION UNDER 35 USC §103(a)

Claim 8 has been rejected under 35 USC 103(a) as unpatentable over Ravitts in view of Wyczalkowski et al.

U.S. Patent No. 5,855,472 (“the ‘472 patent”) discloses a submersible seal to prevent liquid intrusion along a shaft into a motor (i.e. “ingress of fluid”). The seal itself has a stationary and a rotating element. The stationary element is a tube attached to the motor casing. The rotating element is cylindrical that surrounds the stationary tube forming a “labyrinth passageway,” that contains “at least one reverse bend.” An air cushion is formed between the stationary and rotating elements of the seal preventing ingress of any liquid into the motor.

In the present invention, the water seal operates to prevent gas from the boiler cavity escaping up and out of the shaft, around the reduction gear shaft. As depicted in Figure 13 of the present application, the water seal comprises a simple, single hollow tube, surrounding the shaft of a wiping device and does not incorporate a contained air pocket (“cushion”) as in the ‘472 patent.

Therefore, the ‘472 patent does not render obvious, and in fact, teaches away from the present invention. Thus, there is no suggestion or incentive for combining a reference such as the ‘227 patent by Wyczalkowski et al. with the ‘472 patent. Moreover, such a combination does not result in the presently claimed invention.

U.S. Patent No. 6,464,227B1 to Wyczalkowski et al. (“the ‘227 patent”), discloses a fluid seal or “manometric seal,” with multiple components for optimizing the rotation speed of a mixing element and minimizing evaporation. The Office characterizes the ‘227 patent as providing a disclosure of “equal pressures in the tube and outside the tube,” to “regulate the fluid level in the seal.” (Office action, page 4).

In one embodiment of the device disclosed in the '227 patent, fluid within an outer container (3 of Fig. 2) that is open to the outside, flows into a chamber (not marked but corresponds to 6 of Fig. 2) that is open to air trapped within an inverted container (1 of Fig. 2) which is submerged in the same fluid. There is no element in the '227 patent that corresponds to a hollow "tube," which encircles a shaft and prevents leakage of vapor from inside the tube to the ambient air on the top of the fluid in the tube, as in the present invention. (see Figs 1 and column 2, lines 16-43, and Figs 2 and 3 of the '227 patent). The chamber (6 of Fig. 1 and unlabeled in Figs 2 and 3) opens to air within the inverted container 1 directly above the liquid in the chamber and prevents air bubbles from exiting the outside of the chamber to the ambient air.

Thus, the '227 patent also teaches away from the seal of the present invention. Moreover there is no incentive for modifying the chamber of the seal in the '227 patent to replace or modify the seal of the '472 which is directed to preventing liquid from leaking down into the shaft and into the motor.

Even if the chamber of the '227 patent was placed into the device of the '472, in an analogous position, it would operate, if at all, to prevent air bubbles within the liquid inside the rotating seal element of the seal of the '472 patent, from exiting into the liquid on the outside of the rotating seal element and into the air above the liquid outside the rotating seal element. Thus, the chamber of the '227 patent is more analogous to the compartment formed within the rotating seal element of the seal of the '472 patent.

Neither the '472 patent, or the '227 patent, alone or in combination, suggest the present seal device which is configured as a hollow tube encircling a shaft, that operates to prevent vapor escape in the liquid surrounding the shaft into the air above the liquid within the tube, as in the present invention.

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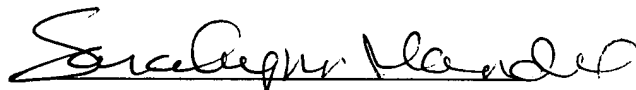
Therefore, the rejection of Claim 8 should be withdrawn and the claim allowed.

CONCLUSION

If a telephone interview would be of assistance in advancing the prosecution of the subject application, Applicants' undersigned attorney invites the Examiner to telephone her at the number provided below.

No fee, other than the fee for extension of time, is deemed necessary in connection with the filing of this response. Applicants hereby enclose a check in the amount of \$55.00 for a one-month extension of time. If any further fee is necessary, the Patent Office is authorized to charge any additional fee to Deposit Account No. 50-0306.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "SaraLynn Mandel", written in black ink.

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